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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/673,140
Filing Date: September 30, 2003
Appellant(s): EVANS ET AL.

Siddhesh V. Pandit
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 03/27/10 appealing from the Pre-Appeal Brief Review mailed 12/29/09 and the Office action mailed on 04/24/09.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-9 are currently pending, and rejected, in the present application.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

The rejection of claim 1 under 35 U.S.C. § 101 has been withdrawn by the examiner.

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6640221

LEVINE

06-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Levine (US Patent 6,640,221).

With respect to claim 1, Levine discloses a computer-implemented method of preventing execution of unnecessary joins between tables in a database, the method comprising the steps of:

- a. presenting a Structured Query Language (SQL) statement to the database, the SQL statement referring directly to a set of tables in the database (Levine: Abstract, lines 1-14; Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Figures 1, 2, 6; Here a Structured Query Language statement is presented to the database using a query tool, which has the scope that extends to a set of tables in the database and returns a result);
- b. preparing a list of tables that have a potential to be used to return the set of results but that are not directly referred to by the SQL statement, wherein the list of tables is the only list prepared (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the query tool prepares a list of tables that are related to returning the set of results but that are not directly referred to by the SQL statement, the user selects the tables from the list which will be referred directly by the SQL statement);
- c. removing tables that must be accessed in order to return the set of results

from the list in accordance with a predetermined set of rules (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2, and 8; Here the tables that will be used by the SQL statement are selected from the list);

- d. preventing execution of joins involving any of the tables remaining in the list, wherein there is at least one table remaining in the list (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2, and 8; Since the tables required by the SQL statement are selected from the original list, the rest of the tables in the list do not participate in the SQL statement and are prevented from participating in execution of joins); and
- e. returning a set of results from the database based on the SQL statement (Levine: Abstract, lines 1-14; Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Figures 1, 2, 6).

With respect to claim 2, Levine discloses a computer-implemented method according to claim 1, wherein the predetermined set of rules includes allowing removal of a table from the list if the table is part of a join chain (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 3, Levine discloses a computer-implemented method according to claim 1, wherein the predetermined set of rules includes a rule allowing removal of a table from the list if the table forms the detail table in a join between a master table and a detail table (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 4, Levine discloses a computer-implemented method according to claim 1, wherein the predetermined set of rules includes a rule allowing removal of a table from the list if detail item values might not exist in a master table joined to a detail table (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 5, Levine discloses a computer-implemented method according to claim 1, wherein the predetermined set of rules includes a rule allowing removal of a table from the list if the table has a mandatory filter (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 6, Levine discloses a computer-implemented method

according to claim 4, wherein the predetermined set of rules further includes a rule preventing removal of a table from the list that would otherwise be allowed, if the join is an outer join on a master table (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 7, Levine discloses a computer-implemented method according to claim 5, wherein the predetermined set of rules further includes a rule preventing removal of a table from the list that would otherwise be allowed, if the join is an outer join on a master table (Levine: Column 4, lines 1-39; Column 5, lines 61-67; Column 6, lines 1-33; Column 13, lines 43-67; Column 14, lines 1-9; Figures 1, 2; Here the tables that will be used by the SQL statement are selected from the list).

With respect to claim 8, Levine discloses a computer program comprising computer program code means adapted to perform the steps of claim 1 when said program is run on a computer (Levine: Column 5, lines 25-30).

With respect to claim 9, Levine discloses a computer program product comprising program code means stored on a computer readable medium for performing the method of claim 1 when said program product is run on a computer (Levine: Column 5, lines 25-36).

(10) Response to Argument

Appellant argues that Levine does not teach or even suggest each and every feature of the present invention.

In Abstract lines 1-14, Column 4 lines 1-39, Column 13 lines 43-67, Column 14 lines 1-9, and Figures 1, 2, and 6 Levine discloses several aspects of his invention. Here Levine discloses presenting a structured query language (SQL) statement to the database using a graphical user interface query tool, the SQL statement having a scope extending to a set of tables in the database and which returns a result. A list of tables is prepared by the query tool that is related to returning a result but is not directly referred by the SQL statement. In Abstract lines 1-12, Column 4 lines 1-9 and 29-39, Column 5 lines 61-67, Column 6 lines 1-33, and in Figures 1, 2, and 6 the user can manually select tables from the provided list to form an intermediate set to generate a valid SQL query, thus removing tables that must be accessed in order to return a set of results. By selecting a intermediate set of a few selected tables, the remaining tables from the original list of tables are prevented from participating in any join execution. A result is returned from the database based on the customized SQL statement. In Abstract lines 12-14, Column 4 lines 10-28, Column 13 lines 43-67, Column 14 lines 1-9, and Figures 6 and 8 Levine discloses multiple aspects of an automatic sequencing algorithm for ensuring a user query produce valid SQL. Only tables related in a join relationship are moved from the first list to the second list, thus preventing execution of joins involving any of the tables remaining on the first list. Thus Levine does disclose each and every feature of the present invention.

Independent claim 1 of the present application contrasts with Levine because it recites that one aspect of the present invention prevents “execution of joins involving any of the tables remaining in the list”.

In Abstract lines 1-14, Column 4 lines 1-39, Column 13 lines 43-67, Column 14 lines 1-9, and Figures 1, 2, and 6 Levine discloses several aspects of his invention. Here Levine discloses presenting a structured query language (SQL) statement to the database using a graphical user interface query tool, the SQL statement having a scope extending to a set of tables in the database and which returns a result. A list of tables is prepared by the query tool that is related to returning a result but is not directly referred by the SQL statement. In Abstract lines 1-12, Column 4 lines 1-9 and 29-39, Column 5 lines 61-67, Column 6 lines 1-33, and in Figures 1, 2, and 6 the user can manually select tables from the provided list to form an intermediate set to generate a valid SQL query, thus removing tables that must be accessed in order to return a set of results. By selecting a intermediate set of a few selected tables, the remaining tables from the original list of tables are prevented from participating in any join execution. A result is returned from the database based on the customized SQL statement. In Abstract lines 12-14, Column 4 lines 10-28, Column 13 lines 43-67, Column 14 lines 1-9, and Figures 6 and 8 Levine discloses multiple aspects of an automatic sequencing algorithm for ensuring a user query produce valid SQL. Only tables related in a join relationship are moved from the first list to the second list, thus preventing execution of joins involving any of the tables remaining on the first list.

Examiner makes blanket citations of large portions of Levine. The Examiner's contention is explicitly rejected by the disclosure of Levine. Specifically, Levine states that the reordering of tables from the "raw" list to the "ordered" list (sets 162-172) is "repeated until all of the join objects have been moved from the 'raw' list to the 'ordered' list..".

Regarding appellant's accusation about the examiner making blanket citations of large proportions of Levine, the examiner merely cited several aspects of Levine's invention which anticipate appellant's invention. In Abstract lines 1-12, Column 4 lines 1-9 and 29-39, Column 5 lines 61-67, Column 6 lines 1-33, and in Figures 1, 2, and 6 Levine discloses presenting a structured query language (SQL) statement to the database using a graphical user interface query tool, the SQL statement having a scope extending to a set of tables in the database and which returns a result. A list of tables is prepared by the query tool that is related to returning a result but is not directly referred by the SQL statement. The user can manually select tables from the provided list to form an intermediate set to generate a valid SQL query, thus removing tables that must be accessed in order to return a set of results. By selecting a intermediate set of a few selected tables, the remaining tables from the original list of tables are prevented from participating in any join execution. A result is returned from the database based on the customized SQL statement.

In Abstract lines 12-14, Column 4 lines 10-28, Column 13 lines 43-67, Column 14 lines 1-9, and Figures 6 and 8 Levine discloses multiple aspects of an automatic sequencing algorithm for ensuring a user query produces valid SQL. Here Levine

discloses presenting a structured query language (SQL) statement to the database using a graphical user interface query tool, the SQL statement having a scope extending to a set of tables in the database and which returns a result. A list of tables is prepared by the query tool that is related to returning a result but is not directly referred by the SQL statement. Only tables related in a join relationship are moved from the first list to the second list, thus preventing execution of joins involving any of the tables remaining on the first list. Contrary to appellants interpretation of the invention of Levine, only "related" tables are moved to the second table or ordered table. Every table in the first list goes through a fetching and determination process until no tables in the first table remain unchecked. Appellant is taking the "no tables remaining in the first list" in step (g) of column 4 lines 27-28 literally while steps (a)-(h) explicitly discusses moving only "related" tables to the second list. Even in the aspect in Column 13 lines 43-67 and Column 14 lines 1-9 only join objects are moved to the ordered list. Appellant has provided an example to clarify the invention of Levine, however appellant has made the error in interpreting the invention of Levine as explained above. The example provides tables A, B, and A1 where A and A1 are related join objects. Following the steps in Column 13 lines 43-67 and Column 14 lines 1-9 first A will be fetched and moved to the ordered list and A1 will follow after being determined to be a "related" join object. However, since B is not a join object related to A or A1, it will not be moved to the ordered list and after repeating the process and going through all the tables in the raw list, the process will stop, having only A and A1 in the second list, thus preventing execution of joins involving B.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

In view of the above, the examiner contends that all limitations as recited in the claims and as argues have been addressed in this Office Action.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Rezwanul Mahmood/

Examiner, Art Unit 2164

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